Influence of Implementation of Capacity Building Strategies of Education Sector Disaster Management Policy on Disaster Preparedness in Public Diploma Teacher Training Colleges in Kenya

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Chief Editor Web: www.ijsdc.org Email: info@ijsdc.org **Editing Oversight** Impericals Consultants International Limited	***Abstract:*** *Capacity building has been identified as a cornerstone of disaster preparedness in education systems worldwide. In Kenya, the Education Sector Disaster Management Policy (ESDMP) highlights capacity building through training, awareness creation, disaster drills, and simulation exercises as key strategies for strengthening resilience in learning institutions. This study examined the influence of implementing capacity building strategies on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs). Using a mixed-methods design, data were gathered from students, lecturers, principals, and Board of Management (BoM) chairpersons. Questionnaires provided quantitative data, analyzed through descriptive statistics and inferential tests (t-tests and ANOVA), while interviews supplied qualitative insights. Findings indicated that although training workshops, awareness programs, and drills were introduced in some colleges, implementation was inconsistent and participation uneven. Students rated capacity building efforts more positively than lecturers, though both groups agreed that preparedness remained limited. Thematic analysis of interviews revealed that capacity building was often constrained by inadequate resources, irregular scheduling, and lack of sustained follow-up. The study concludes that effective disaster preparedness in PDTTCs requires institutionalizing training programs, regularizing drills, and embedding awareness into routine teaching and learning.* ***Keywords:*** *Disaster Preparedness, Capacity Building Strategies, Education Sector, Disaster Management Policy, Teacher Training Colleges*

1.1 Introduction

Disasters continue to disrupt education systems globally, threatening lives and learning continuity. International frameworks such as the Hyogo Framework (2005–2015) and the Sendai Framework (2015–2030) underscore the role of capacity building—through training, awareness creation, and drills—in strengthening institutional resilience (UNDRR, 2015). In Africa, however, weak institutional frameworks and limited resources have hindered the consistent implementation of preparedness initiatives (Ogunleye & Olusola, 2019; Nurmalahayati, 2019).

In Kenya, repeated school fires, floods, and epidemics prompted the Ministry of Education to introduce the Education Sector Disaster Management Policy (2018), which identifies capacity building as a key strategy for preparedness. Public Diploma Teacher Training Colleges (PDTTCs), though mandated to prepare future educators, show mixed progress. While some conduct drills and training sessions, many treat these as occasional rather than routine activities, leaving preparedness fragmented. This article examines the influence of implementing capacity building strategies of the Education Sector Disaster Management Policy on disaster preparedness in PDTTCs, focusing on training programs, awareness initiatives, and drills as vital mechanisms for building resilience.

1.2 Background of the study

Disasters such as fires, floods, terrorism, and epidemics disrupt education globally, threatening lives, damaging infrastructure, and interrupting learning. The UNDRR (2022) defines disasters as significant disruptions that overwhelm local capacity, underscoring the need for preparedness measures such as early warning systems, drills, and evacuation plans. Global frameworks like the Hyogo Framework (2005–2015) and the Sendai Framework (2015–2030) emphasize integrating disaster risk reduction into education policies, enhancing institutional capacity, and fostering resilience through training and simulation (UNDRR, 2015). Past tragedies, such as the 2010 Haitian earthquake that killed thousands of students and teachers, highlight the vulnerability of learning institutions when preparedness is weak (ISDR, 2012).

Regionally, African education systems face similar challenges. Studies in Nigeria revealed inadequate disaster education and limited institutional preparedness (Ogunleye & Olusola, 2019). Research in Zanzibar also pointed to weak institutional frameworks and lack of early warning systems, calling for restructured disaster management mechanisms (Ali, 2015). Such evidence shows that although policies exist, implementation of capacity building and training remains limited across many institutions.

In Kenya, disasters have repeatedly disrupted education, from terrorist attacks at Garissa University (2015) and Westgate (2013) to weather-related tragedies such as the Solai dam burst (2018) and the devastating Mai Mahiu floods of 2024, which claimed over 50 lives and disrupted more than 100 schools (Kenya Red Cross, 2024). These incidents spurred the government to develop the Education Sector Disaster Management Policy (2018), which emphasizes four strategies: management and coordination, capacity building, resource mobilization, and monitoring and evaluation. Capacity building is central, involving training of staff and students, integration of disaster education into curricula, and routine drills to embed preparedness in institutional culture (Republic of Kenya, 2018).

For Public Diploma Teacher Training Colleges (PDTTCs), the need for effective capacity building is especially urgent. These institutions train the future teaching workforce, who in turn are responsible for ensuring disaster preparedness in schools across Kenya. However, evidence shows that while workshops, drills, and awareness activities exist in some colleges, they are irregular, underfunded, and often treated as one-off events rather than continuous processes (Ngari & Ndungu, 2020; Wanjala & Onyango, 2018). This inconsistent implementation leaves PDTTCs only moderately prepared, limiting their ability to protect lives and ensure continuity of learning. This study therefore investigates the influence of implementing capacity building strategies of the Education Sector Disaster Management Policy on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya, seeking to establish whether training, awareness, and drills are translating into meaningful preparedness outcomes.

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1.3 Statement of the Problem
Kenya's Education Sector Disaster Management Policy (2018) was designed to strengthen disaster preparedness in schools and colleges through strategies such as management and coordination, capacity building, resource mobilization, and monitoring and evaluation (Republic of Kenya, 2018). Capacity building—through training, awareness creation, drills, and integration of disaster risk reduction into education—is central to this framework (UNDRR, 2015). Despite this, evidence shows that Public Diploma Teacher Training Colleges (PDTTCs) have not consistently implemented these strategies. Studies in Kenya and the wider region demonstrate that preparedness initiatives are often irregular and poorly institutionalized. For example, Ngari and Ndungu (2020) highlighted gaps in preparedness in the education sector during the COVID-19 pandemic, while Wanjala and Onyango (2018) reported that schools in Homa Bay lacked adequate awareness and disaster planning. Regionally, Ogunleye and Olusola (2019) found that African universities lacked disaster education programs and regular drills, while Ali (2015) showed that institutional frameworks in Zanzibar were undermined by weak coordination and absence of early warning systems. These studies underline that even where policies exist, their implementation remains partial. In PDTTCs, workshops and drills are occasionally held, but participation is uneven, resources limited, and follow-up mechanisms weak. As a result, both lecturers and students report low levels of structured preparedness, while principals and Boards of Management cite inadequate resources as a key barrier (Nurmalahayati, 2019; Kishoyian et al., 2021). This leaves colleges only moderately prepared, raising concerns about their ability to protect lives and ensure learning continuity during emergencies. The problem is especially critical because PDTTCs train the teachers who will serve at primary and secondary levels. Weak capacity building at this stage undermines the transfer of disaster preparedness skills across the wider education system, perpetuating institutional vulnerability. This study therefore examined the influence of implementing capacity building strategies of the Education Sector Disaster Management Policy on disaster preparedness in public diploma teacher training colleges in Kenya.

1.4 Research Question
What is the influence of implementing capacity building strategies of the Education Sector Disaster Management Policy on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya?
1.5 Research Objective
To examine the extent to which the implementation of capacity building strategies—such as training, awareness creation, drills, and simulation exercises—outlined in the Education Sector Disaster Management Policy influence disaster preparedness in Public Diploma Teacher Training Colleges in Kenya.

1.6 Research Hypotheses
Ho. There is no significant statistical difference between lecturers' and students' mean perception on the influence of implementation of capacity building strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya.

1.7 Significance of the Study
This study is significant because it provides insights into how capacity building strategies—including training, awareness creation, and drills—outlined in the Education Sector Disaster Management Policy (Republic of Kenya, 2018) influence disaster preparedness in Public Diploma Teacher Training Colleges.

The findings inform policymakers on the policy's implementation, guide institutional leaders and Boards of Management on resource allocation and stakeholder engagement, and equip lecturers and students with knowledge that can be transferred to schools. Academically, it enriches the limited literature on disaster preparedness in teacher training colleges in Kenya, while practically it offers recommendations to institutionalize capacity building and strengthen resilience in the education sector (UNDRR, 2015; Ogunleye & Olusola, 2019; Ngari & Ndungu, 2020).

1.8 Scope and Delimitation of Study

This study focused on the influence of implementing capacity building strategies of the Education Sector Disaster Management Policy on disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya. The scope was limited to strategies such as training, awareness creation, drills, and simulation exercises, as outlined in the policy (Republic of Kenya, 2018). The target respondents were students, lecturers, principals, and Boards of Management chairpersons, since these groups are directly engaged in preparedness activities.

The study was delimited to public diploma colleges only, excluding private institutions and County Education Officers, as PDTTCs hold the national mandate for preparing the bulk of Kenya's teachers. Geographically, the study covered selected colleges across different regions of Kenya, but the findings may not generalize to other higher education institutions such as universities. Despite these delimitations, the study provides critical insights into how capacity building under the ESDMP shapes preparedness within PDTTCs.

1.9 The Conceptual Framework

Independent Variable   *Dependent Variable*   *Intervening Variables*
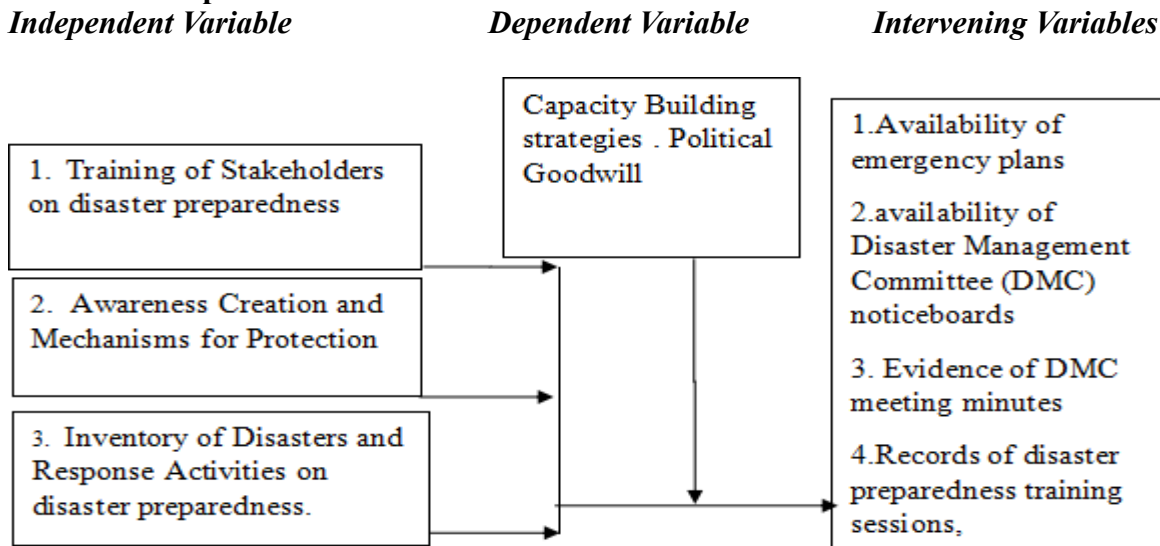
Figure 1: *The Conceptual Framework*
Source: *Own Conceptualization, 2025*

1.10 Literature Review

This review synthesizes the theoretical grounding and empirical evidence on how management and coordination strategies as stipulated in Kenya's Education Sector Disaster Management Policy (ESDMP) shape disaster preparedness in learning institutions, with a specific focus on Public Diploma Teacher

Training Colleges (PDTTCs). The ESDMP frames preparedness around institutional governance: establishing Disaster Management Committees (DMCs), operational Emergency Preparedness and Response Plans (EPRPs), and formal reporting/communication systems, which together anchor coordinated decision-making and stakeholder involvement.

1.10.1 Theoretical Review

Capacity building as a disaster preparedness strategy can be explained through several theoretical perspectives. Vulnerability Theory argues that the extent of disaster risk is shaped by exposure, sensitivity, and coping capacity. This suggests that institutions lacking training and awareness programs are more vulnerable because their members are ill-prepared to respond effectively (Becker et al., 2013). The strength of this theory lies in its ability to highlight how skills and knowledge directly influence institutional resilience. However, its limitation is that it tends to emphasize human vulnerability while paying less attention to structural and systemic factors such as governance and resources. The Systems Approach Theory views institutions as interconnected subsystems, where preparedness depends on the interaction between leadership, staff, students, and external stakeholders (Ali, 2015). Applied to PDTTCs, this theory underscores that capacity building cannot succeed in isolation; it requires coordination across all actors to be effective. Its strength is in explaining preparedness as a dynamic process involving continuous feedback, while its weakness is its assumption of uniform interaction among stakeholders, which may not always hold true in resource-constrained environments. Together, these theories demonstrate that capacity building strategies—training, drills, and awareness creation—are most effective when implemented systemically and when they directly address institutional vulnerabilities.

1.10.2 Empirical Review

Globally, studies affirm the importance of capacity building in educational preparedness. For example, Patel et al. (2023) found that universities in the United States lacked efficient disaster response mechanisms despite students valuing disaster preparedness education. Similarly, Nurmalahayati (2019) showed that in Indonesia, disaster preparedness education faced challenges such as inadequate teacher training, disjointed policies, and limited sustainability. These findings confirm that while capacity building strategies are widely acknowledged, their implementation is often inconsistent.

In Africa, weak institutional frameworks continue to undermine disaster preparedness. Ogunleye and Olusola (2019), studying Nigerian universities, observed that disaster preparedness training and education were inadequate, with few institutions conducting regular drills or integrating disaster risk reduction into curricula. Ali (2015) similarly reported that Zanzibar's disaster management system suffered from poor coordination and lack of early warning systems, which limited institutional readiness. These studies show that capacity building in African educational institutions is often ad hoc and underfunded.

In Kenya, disaster preparedness in educational institutions has been hindered by inadequate awareness programs, poor enforcement of safety guidelines, and irregular simulation drills. Ngari and Ndungu (2020) highlighted the challenges faced during the COVID-19 pandemic, noting that institutions were unprepared to adapt quickly due to limited training. Wanjala and Onyango (2018) found that secondary schools in Homa Bay County lacked structured awareness programs, leaving learners psychologically vulnerable. Kishoyian et al. (2021) further observed that even where guidelines existed, implementation

varied widely across schools, with little emphasis on sustainable training and drills. These local studies indicate that despite the introduction of the Education Sector Disaster Management Policy (2018), capacity building in many institutions, including PDTTCs, remains inconsistent and insufficient.

The reviewed literature reveals that while the importance of capacity building for disaster preparedness is widely recognized globally, regionally, and locally, its implementation in Public Diploma Teacher Training Colleges in Kenya remains under-researched. Existing studies tend to focus on primary and secondary schools (Wanjala & Onyango, 2018; Kishoyian et al., 2021) or general higher education institutions (Ogunleye & Olusola, 2019; Patel et al., 2023), leaving PDTTCs largely unexamined. Furthermore, there is limited empirical evidence on how training, awareness creation, and drills—key components of the Education Sector Disaster Management Policy—are influencing preparedness outcomes in these colleges. This study addresses these gaps by specifically investigating the influence of capacity building strategies on disaster preparedness in PDTTCs.

1.11 Research methodology

Research Design: The study employed a mixed-methods design, combining both quantitative and qualitative approaches to provide a comprehensive understanding of how capacity building strategies influence disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs). Quantitative data were collected through structured questionnaires administered to students and lecturers, enabling measurement of perceptions across large respondent groups. Qualitative data were gathered through interviews with principals and Boards of Management (BoM) chairpersons, offering deeper insights into institutional practices, challenges, and leadership perspectives. This design was chosen because capacity building—through training, awareness creation, and drills—cannot be fully captured by numerical data alone. While quantitative analysis identified trends and statistical differences in perceptions, qualitative evidence enriched the findings by explaining the contextual and institutional factors influencing preparedness. This integration strengthened the reliability and validity of the results, consistent with the recommendations of Creswell and Creswell (2018) for studies involving complex social processes such as disaster preparedness.

Study Area: The study was conducted in Public Diploma Teacher Training Colleges (PDTTCs) in Kenya, which play a central role in preparing future teachers for the basic education sector. These institutions were selected because they fall under the tertiary and training category of the education system and are mandated by government policy to produce professionally competent teachers. Unlike private TTCs, PDTTCs operate directly under the Ministry of Education and are therefore expected to fully implement the Education Sector Disaster Management Policy (2018), including capacity building strategies such as training, awareness creation, and simulation drills.

The focus on PDTTCs was also informed by their strategic importance in cascading disaster preparedness knowledge. By training prospective teachers in preparedness, PDTTCs indirectly influence disaster resilience in primary and secondary schools across the country.

Target Population: The target population comprised third-year students, lecturers, principals, and Board of Management (BoM) chairpersons in the selected PDTTCs. These groups were chosen because they represent different levels of engagement with disaster preparedness:

Students experience preparedness interventions firsthand and are often the most affected during disasters. Lecturers act as both implementers of preparedness initiatives and role models for students.

Principals hold administrative responsibility for implementing policy strategies, including the formation of DMCs.

BoM chairpersons provide governance oversight and are instrumental in resource allocation and coordination with external stakeholders. A total of 372 participants were involved in the study, consisting of 269 students, 97 lecturers, 3 principals, and 3 BoM chairpersons. Students and lecturers were selected

using stratified and simple random sampling to ensure representation across gender and academic specialization. Principals and BoM chairpersons were included through census sampling since their numbers were small.

Sampling Procedure: The study purposively sampled 372 respondents drawn from 269 students, 97 lecturers, 3 principals, and 3 Board of Management chairpersons in Public Diploma Teacher Training Colleges. These groups were selected because they are directly engaged in teaching, learning, and institutional governance, and thus most relevant to disaster preparedness. County Education Officers and private TTCs were excluded, as the focus was limited to public diploma colleges mandated to train the majority of Kenya's teachers.

Sample Size: In order to achieve reliability and validity, the study engaged a total of 372 respondents, comprising 269 students, 97 lecturers, 3 principals, and 3 Board of Management chairpersons from selected Public Diploma Teacher Training Colleges.

Tools of Data Collection: Data were collected using two main instruments. Structured questionnaires were administered to students and lecturers to capture their perceptions of the implementation of capacity building strategies such as training, awareness programs, and drills. The questionnaires included both closed and Likert-scale items, allowing for statistical analysis of preparedness levels. In addition, interview schedules were used with principals and Boards of Management (BoM) chairpersons to gather qualitative insights on institutional practices, leadership roles, and challenges affecting the operationalization of capacity building strategies.

Data Collection Procedures: Data collection was carried out in two phases. First, questionnaires were distributed in person to students and lecturers within the selected Public Diploma Teacher Training Colleges, with the researcher ensuring that respondents had adequate time to complete them before collection. Prior to the main exercise, the instruments were piloted in a comparable institution to test clarity, reliability, and validity.

Second, interviews with principals and Boards of Management (BoM) chairpersons were conducted face-to-face. These sessions were guided by structured interview schedules and, with consent, notes and recordings were taken to ensure accuracy of responses. This combination of methods ensured that both broad perceptions and in-depth insights into the implementation of capacity building strategies were captured effectively.

Data Analysis Procedures: Data analysis followed both quantitative and qualitative approaches. Quantitative data from questionnaires were coded and entered into SPSS, where descriptive statistics (frequencies, percentages, means, and standard deviations) were generated to summarize respondents' views. To test the hypotheses on the influence of capacity building strategies, independent samples t-tests and ANOVA were applied, with statistical significance set at $p < 0.05$.

For qualitative data, responses from interviews with principals and Boards of Management (BoM) chairpersons were transcribed and analyzed thematically using Braun and Clarke's (2006) six-step framework. Codes were developed inductively, then grouped into themes that reflected institutional practices, challenges, and perceptions of preparedness. Finally, findings from both strands were triangulated to provide a comprehensive picture of how capacity building strategies influenced disaster preparedness in Public Diploma Teacher Training Colleges.

Ethical Considerations: The study adhered to established ethical research standards. Approval to conduct the research was obtained from the National Commission for Science, Technology and Innovation (NACOSTI) and the Ministry of Education. Permission was also sought from the principals of participating colleges before engaging respondents. All participants were fully informed about the purpose of the study, and informed consent was obtained prior to data collection.

Confidentiality and anonymity were guaranteed by avoiding personal identifiers in questionnaires and interview transcripts. Respondents were assured that participation was voluntary and that they could withdraw at any stage without penalty. To protect participants, data were securely stored and used solely

for academic purposes. These safeguards ensured the rights, dignity, and safety of all respondents were respected throughout the study.

1.12 Study Findings
Response Rate of the Questionnaires
The study achieved a high overall response rate, with 253 of 269 students (94%), 93 of 97 lecturers (95%), and all 3 principals and 3 BoM chairpersons (100%) completing the instruments. This exceeded the 70% threshold recommended by Mugenda and Mugenda (2019) for reliable research, ensuring the data were sufficiently comprehensive and valid for analysis.

Results for Background Data
The demographic analysis provided important context for interpreting the findings. Among the students, the majority were female, reflecting the gender trends in teacher education. Most were in their third year of study, which positioned them well to assess institutional preparedness measures. For the lecturers, the gender distribution was nearly balanced, with most having between 5 and 10 years of teaching experience in teacher training colleges. A large proportion held master's degrees, affirming their academic and professional competence. The principals were mainly aged above 45 years, with over a decade of experience in educational leadership, while the Board of Management chairpersons were older, predominantly above 50 years, bringing extensive governance experience. These background characteristics ensured that responses reflected insights from both beneficiaries of preparedness efforts (students) and institutional decision-makers (lecturers, principals, and BoM chairpersons

Table 1: Students and Lecturers Respondents Background Data

Demographic Information Students	Frequency (F)	Percentage %
Gender		
Male	117	46.25
Female	136	53.75
Age 20 and below years	28	11.1
21-25 years	126	49.8
26-29 years	62	24.5
30 and above years	37	14.6

Demographic Information	Frequency (F)	Percentage %
Lecturers		
Gender		
Male	49	52.7
Female	44	47.3
Duration in Current College		
1-5 years	14	15.0
6-10 years	66	71.0
11-15 years	11	11.8
Over 15 years	2	2.2
Educational Qualification		
Diploma	0	0.0
Bachelors	74	79.6

Masters	18	19.4
PhD	1	1.1
Other	0	0.0

Source: *Field data, 2025*

Gender of the Respondents

The gender composition of the student participants revealed a noteworthy gender balance, with a total of 253 respondents. Of these, 136 students (53.75%) were female, while 117 students (46.25%) were male as shown in figure 3. This distribution aligns with recent trends in education, where there is an increasing presence of female students in teacher training colleges. The gender distribution of the lecturers involved in this study revealed that male lecturers constituted a slight majority. Specifically, 52.7% of the respondents were male, while 47.3% were female. This gender distribution is reflective of the general trends in the lecturer's composition of the participating colleges, where the male lecturers slightly outnumber their female counterparts. The gender distribution of the principals was a key area of focus for this study, providing insights into the representation of male and female leaders within the public teacher training sector. The findings revealed that 2 of the principals were male, while 1 was female. While gender-based research in disaster preparedness remains limited, it was crucial to understand how gender dynamics could influence policy implementation in these institutions

Age distribution of the respondents

The majority of student respondents were aged 21–25 years (49.4%), reflecting the typical age group in diploma teacher training colleges. This was followed by those aged 26–29 years (24.5%), 30 years and above (14.6%), and 20 years or younger (11%). The predominance of the 21–25 group indicates that most students were in the formative stage of professional development, with a foundational understanding of disaster preparedness and readiness to apply management strategies. The age distribution of the 93 lecturer respondents was analyzed to assess their professional experience and potential perspectives on disaster preparedness. The participants were grouped into three age intervals, each spanning ten years. The results, as shown in Table 9, revealed that the largest proportion of respondents, 51.6%, were between the ages of 40 and 49. A further 38.7% were aged between 30 and 39, while only 9.7% were above 49 years of age. The majority of lecturers, therefore, fall within the 40 and above age category, a group that likely brings extensive professional experience. Age was considered an important demographic variable in this study, as it often correlates with experience and administrative expertise. The principals were grouped into two age brackets: 41-50 years and 51-60 years. The findings showed that the majority of principals 2 were aged between 51-60 years, while 1 fell within the 41-50 age range (see figure 8). The predominance of older principals (over 40 years) is noteworthy, as it suggests that these individuals likely have substantial prior experience in educational leadership, possibly having served as senior lecturers or deputy principals before assuming their current roles.

Highest Level of Education of Lecturers and Principals Respondents

Academic qualifications were also assessed to determine the level of education among the lecturers and their potential for engaging with complex disaster management policies. The findings, as illustrated in table 9, indicate that a significant majority of lecturers, 79.6%, hold a bachelor's degree. A smaller proportion, 19.4%, possess a master's degree, while only 1.1% of the lecturers had attained a doctoral degree (PhD). Notably, none of the lecturers reported having qualifications below a bachelor's degree,

highlighting that all participants meet the minimum academic standards for teaching at the diploma level. Academic qualifications are critical indicators of the principals' knowledge and professional capacity. All three principals in the study reported holding a master's degree as their highest level of academic qualification. None of the principals held a bachelor's degree or a doctorate. According to the data, all the Chairpersons reported having at least a bachelor's degree, with no Chairperson holding a master's or doctoral degree.

Influence of Implementation of Capacity Building Strategies on Disaster Preparedness in PDTTCs
Table 1: Independent Samples t-Test Results on Capacity Building Strategies

Capacity Building Component	Students (n=253) M (SD)	Lecturers (n=93) M (SD)	t	p-value	Interpretation
Training of stakeholders	3.36 (1.05)	2.71 (0.97)	4.213	< .001	Significant difference
Awareness creation & mechanisms	3.42 (1.09)	2.88 (0.95)	3.857	< .001	Significant difference
Inventory of disasters & response activities	3.11 (1.02)	2.46 (0.91)	4.009	< .001	Significant difference

Source: Field data, 2025

Training of Stakeholders on Disaster Preparedness
The analysis showed that students rated training more positively (M = 3.36, SD = 1.05) than lecturers (M = 2.71, SD = 0.97). An independent samples t-test confirmed that the difference was statistically significant (t = 4.213, p < .001). This indicates that while students perceived some benefit from training workshops and orientations, lecturers believed training remained irregular and inadequate. Interviews with principals and Boards of Management (BoM) further revealed that training was often conducted only when external partners were involved, and lacked sustainability.

Awareness Creation and Mechanisms for Protection
Students also rated awareness creation efforts higher (M = 3.42, SD = 1.09) compared to lecturers (M = 2.88, SD = 0.95). The difference was statistically significant (t = 3.857, p < .001). Students cited posters, safety talks, and occasional drills as evidence of awareness, while lecturers expressed concerns over the absence of structured programs and limited follow-up. Qualitative findings showed that while protective mechanisms such as fire extinguishers and emergency exits were available, their maintenance and the training of staff and students on their use were inconsistent.

Inventory of Disasters and Response Activities
When asked about institutional inventories of past disasters and response measures, students rated their existence and usefulness moderately (M = 3.11, SD = 1.02), whereas lecturers gave significantly lower ratings (M = 2.46, SD = 0.91). The t-test showed a statistically significant difference (t = 4.009, p < .001). Interviews with principals and BoM confirmed that most colleges lacked systematic records of disaster events and responses. As a result, lessons from past incidents were rarely integrated into preparedness planning, weakening institutional resilience.

Across all three capacity building components, students consistently rated preparedness measures more positively than lecturers. However, the differences were statistically significant in each case (*p* < .001),

indicating that lecturers perceived training, awareness, and record-keeping as insufficiently institutionalized.

Discussion of the Findings

The study sought to examine how the implementation of capacity building strategies under the Education Sector Disaster Management Policy (2018) influences disaster preparedness in Public Diploma Teacher Training Colleges (PDTTCs). Findings revealed consistent differences between students and lecturers, with students perceiving training, awareness creation, and record-keeping more positively than lecturers. Independent samples t-tests confirmed that these differences were statistically significant across all components ($p < .001$), suggesting that although some capacity building activities were present, their institutionalization was weak. On training of stakeholders, students reported that they benefited from workshops and orientations, whereas lecturers emphasized limited exposure and lack of continuous professional development. These results align with Protection Motivation Theory (Rogers, 1975; Rippetoe & Rogers, 1987), which suggests that individuals are more likely to adopt protective behaviours when they perceive both the severity of a threat and their ability to cope. Students, often targeted with introductory training, may have felt moderately empowered, while lecturers—who expected deeper, sustained programs—saw the inadequacy more clearly. Similar challenges were reported in Nurmalahayati's (2019) study in Indonesia, where teacher training was fragmented and undermined the sustainability of disaster preparedness programs.

Regarding awareness creation and mechanisms for protection, students cited posters, safety talks, and occasional drills as evidence of preparedness. However, lecturers rated these efforts lower, highlighting the lack of structured and continuous awareness campaigns. This disparity is consistent with Vulnerability Theory (Blaikie et al., 2004), which emphasizes that institutional weaknesses, such as poor awareness mechanisms, increase exposure to risks. Regionally, Ogunleye and Olusola (2019) observed similar weaknesses in Nigerian universities, where disaster education was inadequate and awareness campaigns sporadic. Locally, Wanjala and Onyango (2018) noted that schools in Homa Bay lacked sufficient disaster preparedness programs, leaving learners psychologically vulnerable.

The third component, inventory of disasters and response activities, was found to be the weakest area. While some colleges maintained limited records of past incidents, many lacked systematic documentation. Students were largely unaware of such inventories, while lecturers stressed that without proper records, lessons from past disasters were not integrated into future planning. This reflects the concerns raised by Ngari and Ndungu (2020), who found that institutions were unprepared to adapt quickly during the COVID-19 pandemic due to poor institutional memory and weak capacity building systems. The Systems Approach Theory (Ali, 2015) reinforces this finding by showing that disaster preparedness requires interaction between leadership, staff, and learners, supported by structured knowledge systems like inventories.

Overall, the findings suggest that while capacity building strategies have been introduced in PDTTCs, they remain irregular, reactive, and under-resourced. The consistent perception gaps between students and lecturers reveal weaknesses in institutional follow-through, where students experience surface-level activities but lecturers and leaders recognize deeper structural inadequacies. This confirms global observations by Patel et al. (2023) that higher education institutions often lack efficient disaster response systems despite acknowledging their importance.

Theoretically, the results validate Protection Motivation Theory by demonstrating that preparedness is closely tied to perceptions of coping capacity, while Vulnerability Theory highlights the consequences of weak institutionalization. The Systems Approach Theory further explains why fragmented strategies fail—because preparedness requires a coordinated system rather than isolated activities.

Hypothesis Testing
Null Hypothesis (H_0):
There is no significant statistical difference in the mean perception of lecturers on the influence of implementation of capacity building strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by gender.
Alternative Hypothesis (H_1):
There is a significant statistical difference in the mean perception of lecturers on the influence of implementation of capacity building strategies on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya when compared by gender.
Test Results:
An independent samples t-test was conducted to compare the mean perceptions of male and female lecturers. Results showed that male lecturers (M = 2.79, SD = 0.96) and female lecturers (M = 2.75, SD = 0.94) did not differ significantly in their perceptions of capacity building strategies (t = 0.184, p = .855).
Interpretation:
Since $p > 0.05$, the null hypothesis (H_0) was accepted. This indicates that gender had no significant influence on lecturers' views regarding the implementation of capacity building strategies in PDTTCs. Both male and female lecturers consistently reported that training, awareness creation, and inventories of disasters were insufficiently institutionalized, pointing to systemic challenges rather than gender-based differences.

1.13 Conclusion
This study examined the influence of implementing capacity building strategies of the Education Sector Disaster Management Policy (2018) on disaster preparedness in Public Diploma Teacher Training Colleges in Kenya. The findings revealed that while colleges have introduced training, awareness programs, and protective mechanisms, their implementation remains irregular, underfunded, and insufficiently institutionalized. Students rated preparedness efforts more positively than lecturers, yet independent t-tests confirmed that these differences were statistically significant ($p < .001$), indicating systemic gaps in sustainability and effectiveness. Inventories of disasters and response activities were particularly weak, with many institutions failing to document past events and integrate lessons into preparedness planning. Interviews with principals and Boards of Management confirmed that financial constraints, lack of follow-up, and overreliance on external partners hindered sustained capacity building. The study concludes that disaster preparedness in PDTTCs is hindered less by the absence of policy and more by its fragmented and inconsistent implementation. To build resilient institutions, capacity building strategies must be mainstreamed into institutional culture through continuous training, regular drills, and systematic documentation, supported by leadership commitment and resource allocation.

1.13 Recommendations

To strengthen disaster preparedness in Public Diploma Teacher Training Colleges, the study recommends that capacity building strategies be institutionalized as continuous processes rather than one-off events. Training workshops for both students and lecturers should be conducted regularly, supported by professional development programs that equip staff with up-to-date disaster management skills. Awareness creation should be integrated into college routines through orientations, posters, safety talks, and simulation exercises, ensuring that all stakeholders are consistently engaged. Colleges should also develop and maintain comprehensive inventories of past disasters and response activities, using them to inform planning and improve preparedness. To achieve this, leadership and Boards of Management should allocate dedicated resources for preparedness activities and reduce overreliance on external partners. Finally, the Ministry of Education should enhance oversight of the Education Sector Disaster Management Policy (2018) by monitoring the frequency and quality of training, awareness programs, and disaster drills to ensure that capacity building strategies translate into measurable resilience.

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